

# DYNAMIC BEHAVIORAL QUEUE CLASSIFICATION AND WEIGHTING

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## ABSTRACT

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10 The present invention defines a method and apparatus to extend class-based  
queuing (CBQ) with multiple "behavioral" queues per class, to include a dynamic  
weighting mechanism between these queues. The packets are forwarded from the  
behavioral queues according to the weighting assigned to each queue. The weighting  
for packet scheduling of the queues is adjusted to account for additional flow going  
through the queues. The weight of a queue is controlled relative to the weight  
available to other queues. When a flow is reclassified, the queue weights is readjusted  
accordingly. Well behaved flows experience low delay and can thus achieve a fair  
bandwidth allocation without having to have multiple packets queued to compete with  
15 non-adaptive aggressive flows.